Section I - Product and Company Information

Product Name | Nonyl Acridine Orange (NAO)
Product Number | PK-CA707-70012
Product Classification | Cell Biology Reagents
Company and Contact Information | PromoCell GmbH
Sickingenstrasse 63/65
69126 Heidelberg
Germany
Phone: +49 6221 649 34 0
E-mail: info@promokine.info

Section II - Hazard Information

<table>
<thead>
<tr>
<th>Product Name/Chemical Name</th>
<th>CAS Number</th>
<th>EC-No.</th>
<th>Weight %</th>
<th>Classification according to regulation (EC) No 1272/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonyl Acridine Orange (NAO)</td>
<td>75168-11-5</td>
<td>--</td>
<td>70-100%</td>
<td>Skin irritation (Category 2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Eye irritation (Category 2A)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Specific target organ toxicity - single exposure (Category 3)</td>
</tr>
</tbody>
</table>

Section III - Formulation and Ingredients Information

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Volume</th>
<th>Safety Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonyl Acridine Orange (NAO)</td>
<td>Solid</td>
<td>50 mg</td>
<td>See below</td>
</tr>
</tbody>
</table>

Nonyl Acridine Orange (NAO)

Classification according to Regulation (EC) No 1272/2008[CLP]:
- Skin irritation (Category 2)
- Eye irritation (Category 2A)
- Specific target organ toxicity - single exposure (Category 3)

Labelling according to Regulation (EC) No 1272/2008[CLP]

Pictogram:

Signal word: Warning
Hazard statement(s):
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

Precautionary statement(s):
- P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P264 Wash skin thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.

HMIS Classification
- Health hazard: 2
- Flammability: 0
- Physical hazards: 0
NFPA Rating

- Health hazard: 2
- Fire: 0
- Reactivity Hazard: 0

Section IV - First Aid Measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact: Wash off with soap and plenty of water. Consult a physician.
In case of eye contact: Flush eyes with water as a precaution.
If swallowed: DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section V – Fire-Fighting Measures

Suitable extinguishing media: carbon dioxide, dry chemical extinguishers, foam extinguishers or water.
Special protective equipment for firefighters: Wear self contained breathing apparatus for firefighting if necessary.

Section VI - Accidental Release Measures

Personal precautions: Avoid breathing vapors, mist or gas. Remove all sources of ignition.
Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods for cleaning up: Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

Section VII - Handling and Storage

Precautions for safe handling: Avoid inhalation of vapor or mist. Avoid direct contact with substance.
Conditions for safe storage:
Keep container tightly closed in a dry and well-ventilated place.
Store at 4 °C.

Section VIII - Personal Protection and Exposure Control Information

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>Limit value</th>
<th>Amount</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonyl Acridine Orange (NAO)</td>
<td>75168-11-5</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Personal protective equipment

Respiratory protection
Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Section IX - Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Nonyl Acridine Orange (NAO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>Orange Solid</td>
</tr>
<tr>
<td>Odor:</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor Threshold:</td>
<td>No data available</td>
</tr>
<tr>
<td>pH:</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting Point/ Freezing Point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporate rate:</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability:</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive Limits:</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density:</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility:</td>
<td>DMSO, DMF</td>
</tr>
<tr>
<td>Partition coefficient:</td>
<td>n-octanol/water</td>
</tr>
<tr>
<td>Auto-ignition Temperature:</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive Properties:</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising Properties:</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Section X - Chemical Stability and Reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Nonyl Acridine Orange (NAO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Stability:</td>
<td>Stable under recommended storage conditions</td>
</tr>
<tr>
<td>Possibility of hazardous reactions:</td>
<td>no data available</td>
</tr>
<tr>
<td>Conditions to Avoid:</td>
<td>Heat, flames and sparks.</td>
</tr>
<tr>
<td>Materials to Avoid:</td>
<td>No data available</td>
</tr>
<tr>
<td>Hazardous decomposition products:</td>
<td>Under fire conditions: Carbon oxides</td>
</tr>
<tr>
<td></td>
<td>Other: no data available</td>
</tr>
</tbody>
</table>

Section XI - Toxicological Data

Nonyl Acridine Orange (NAO)

Acute toxicity
- Oral LD50: None
- Inhalation LC50: None
- Dermal LD50: None
- Other information on acute toxicity: no data available

Skin corrosion/irritation: no data available
Serious eye damage/eye irritation: no data available
Respiratory or skin sensitization: no data available
Germ cell mutagenicity: no data available
Carcinogenicity
- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**: no data available

**Specific target organ toxicity – single exposure (Globally Harmonized System)**: no data available

**Specific target organ toxicity – repeated exposure (Globally Harmonized System)**: no data available

**Aspiration hazard**: no data available

**Potential health effects**

- **Inhalation**: May be harmful if inhaled. May cause respiratory tract irritation.
- **Ingestion**: May be harmful if swallowed.
- **Skin**: May be harmful if absorbed through skin. May cause skin irritation.
- **Eyes**: May cause eye irritation.

**Additional Information**: RTECS: None

---

### Section XII - Ecological Information

**Nonyl Acridine Orange (NAO):**
- **Persistence and degradability**: no information available
- **Toxicity**: no information available
- **Mobility in soil**: no information available
- **PBT and vPvB assessment**: no information available
- **Other adverse effects**: no information available

---

### Section XIII - Disposal

Do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

---

### Section XIV - Transport Information

**Nonyl Acridine Orange (NAO):**
- **DOT (US), IMDG, IATA**: not dangerous good during transportation

---

### Section XV - Classification and Regulatory Information

- **Us Toxic Substances Control Act (TSCA)**: Not Listed
- **SARA 302**: No chemicals were found.
- **SARA 313**: No chemicals were found.
- **SARA 311/312 Hazards**: Nonyl Acridine Orange (NAO): Acute Health Hazard

- **EU Regulations**: none

---

### Section XVI - Other Information / Disclaimer

The information provided above is believed to be correct to our best knowledge, but does not purport to be all inclusive, and shall be used only as a guide. This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. PromoCell GmbH shall not be held liable for any damage resulting from handling or contact with the above product.

---

FOR IN VITRO RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC PROCEDURES.